Abstract

Failure investigation in a SAN providing virtual volumes requires a high degree of knowledge from the SAN administrator. Also, the relative severities of failure events issued from different devices must be evaluated by the SAN administrator.

The SAN manager obtains information from the management agents in the devices in the SAN. Using the obtained information, the SAN manager manages the association relations between the server and the virtual volumes and the real volumes in the SAN. The SAN manager receives failure messages from multiple devices and uses the association relations and a failure analysis dictionary table to determine the contents of the failure messages and associations between failure messages. Failures that are causal failure are identified and displayed.

The SAN manager is equipped with a conversion table for converting failure messages issued from different storage devices to a common severity. When a failure message is received, a notification is sent to a high-level program and an administrator based on the common severity defined in the conversion table.